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U. S. Department of Agriculture

HOUSEKEEPERS' CHAT

WEDNESDAY, JUNE 16, 1937

(FOR BROADCAST USE ONLY)

SUBJECT: "SIRUP NEWS." Information from the Office of Experiment Stations,
U.S.D.A.

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In a good many American homes, farm homes especially, the sirup pitcher appears on the table at all three meals of the day. Some people say you can tell what part of the country you are in by looking in the sirup pitcher. If it holds cane sirup or refiners' sirup, you can make a good guess that you are in the "deep South." If it holds sorgo or sorghum sirup, you are a little farther north where the farmers raise sorghum. If the pitcher is full of maple sirup, you are probably up in New England or in one of the northern States where the sugar-maple trees grow. That part of the country called the "Corn Belt" also produces a sirup--corn sirup, of course. The one of our familiar farm-produced sirups that you cannot tie down to any particular locality is honey, since almost every State produces some variety of honey. Then, too, many families use the commercial blends of sirups that sell under trade names--mixtures of corn and maple and cane sirup, for example.

These are among the well-known sirups which Americans use so much at the table with hot breads and also for cooking.

But any day now the faithful family sirup pitcher is likely to have a big surprise. Instead of sorghum or maple sirup--or whatever it has been used to, it may find itself filled with Tennessee sweetpotato sirup, or North Dakota Buttercup-squash sirup, or Florida citrus-and-cane-juice sirup. These new sirups have recently been developed at the Experiment Stations in the 3 States mentioned.

As you know, the scientists at the different experiment stations are always on the lookout for new uses for the agricultural products of their States. At the Tennessee Station recently chemists have been searching for new uses for sweetpotatoes, particularly for the culls of the crop--the potatoes that each year are a loss to the farmers because they are too large or too small to market well. In this search they came upon the idea of using sweetpotatoes to make sirup. Sweetpotatoes are rich in starch and the problem before these Tennessee chemists was to change the starch in the potatoes to sugar. Fortunately sweetpotatoes happen to contain an enzyme called diastase, which will convert the starch into dextrin and maltose sugar when the potato is heated. So, very briefly, the new Tennessee process for making sweetpotato sirup is to heat the potatoes slowly with water for half an hour, then boil to soften them, then extract the juice and evaporate it to sirup consistency.

The Tennessee Station reports that this sweetpotato sirup is light-colored, has a characteristic flavor, and is not so sweet as cane sirup so blends well with such sweeter sirups as cane or maple or honey or molasses. As for its uses, tests at the Station showed that it is good as a sweetening material for cooking, baking and preserving as well as for table use.

Says the Tennessee report: "The quality and yield of sirup depends on the variety of potato used and on the equipment and method of making. Any of the well-known varieties of sweetpotato will give sirup, but the Nancy Hall is especially good. If directions are carefully followed, one 50-pound bushel of Nancy Hall potatoes will yield 7 and a half gallons of juice"..... which cooks down to 5 and a half quarts of sirup.

So much for the new sweetpotato sirup. Now about the new squash sirup. Some years ago scientists at the North Dakota Experiment Station developed a squash that was particularly adapted to growing in that State. They gave it the name of Buttercup squash. Now the food chemists at this same station find that the Buttercup squash makes a good table or cooking sirup. They describe it as a "very acceptable sirup." They say that it is lighter in color than molasses and resembles a good grade of sorghum sirup--with a squash flavor.

Then, the Florida Station has also been concerned with the sirup problem. Florida chemists recently prepared a novel sweetening sirup by blending orange and grapefruit juice with cane juice before the cane juice is evaporated to sirup in the usual way. The citrus juice prevents the sirup from forming sugar crystals on standing, as cane sirup is very likely to do, and it also gives the sirup a flavor which the Florida Station reports as superior to the flavor of pure cane juice. In the preliminary tests the investigators found that the proportion of citrus to cane juice should not be more than 1 part in 7. They also found that even a much smaller proportion of citrus juice prevented the formation of sugar crystals as the sirup stands.

Speaking of what happens to sirup as it stands reminds me of still another item of sirup news. One of the problems in making sorghum sirup is that it is likely to become cloudy on standing, which makes it less attractive than clear sirup. The chemists at the Tennessee Station have been working to find a method of preventing this cloudiness. They have recently discovered that an enzyme known as invertase will clarify the sorghum sirup. They add a certain amount of invertase to the sorghum juice after the juice has been evaporated to the semi-sirup stage and then cooled to about 140 degrees Fahrenheit. Then they let the juice stand 12 hours before they cook it down to the proper sirup consistency. Sorghum sirup prepared by this method has remained clear and free from sugar crystals after standing for 6 months.

That concludes the sirup news from 3 State experiment stations as reported to the Department of Agriculture at Washington, D. C.

